

Work Order ID 93319 - 2

November-15-12 11:37:33 AM

93319

Page 1

Item ID: D6101-003

Revision ID:

Item Name: Saddle Billet, 7075

Start Date: 11/15/12 Start Qty: 30.00

Required Date: 11/30/12 Req'd Qty: 30.00

Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan:

MCJ

Date: 12-11-12 Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Se: 2
Hou:

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D6101

Rev B

100

100

Purchasing

Purchasing

PURCHASING

0.00

Memo

Issue P/O:

18441

0.00

a) Description: Alluminum billet

b) 7.875" x 6.250" x 2.00" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 7.875" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

CL 12/11/12 30

110

110

Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

0.00

Memo

Ensure material certification is attached

0.00

44/47 (30)

43/01/3 (2)

Work Order ID 93319

November-15-12 11:37:33 AM

93319

Page 2

Item ID: D6101-003

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Saddle Billet, 7075

Stop ***NS2***

Start Date: 11/15/12 Start Qty: 30.00

30

Cust Item ID:

Required Date: 11/30/12 Req'd Qty: 30.00

30

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

DAS 14 13/01/06

2

28

2

DAS 25 12-12-10

130

Identify as per dwg & Stock Location: MAT 42

0.00

130

Packaging

Memo

0.00

Packaging

F.K. 12/12/10 13/01/06

2

28

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.00

Quality Control

13/1/10

MAT

12-12-11

PL 13-01-7

Picklist Print

November-15-12 11:37:33 AM

Page 1

Work Order ID: 93319

Parent Item: D6101-003

Parent Item Name: Saddle Billet, 7075

Start Date: 11/15/12

Required Date: 11/30/12

Start Qty: 30.00

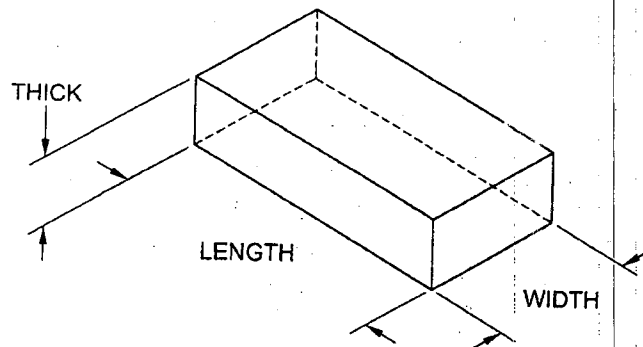
Required Qty: 30.00

Comments: IPP A: 01.05.04New IssueEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003P 7075-T7351 2X6.25X7.875		Purchased	No			110	Each	0.0000	1	30			

[Handwritten Signature] (30)
10/12/13 (2)

SPECIFICATION CONTROL DRAWING



SHORT COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 93319 M15
12-11-16

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

10-12-05
10-12-05

10-12-05

10-12-05
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10-12-05
10-12-05

10-12-05
10-12-05

**Castle Metals®**

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 1 of 2

No de Formulaire d'Emballage / Shipment No: 1565010

Expédié de / Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL - CASTLE METALS 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Vendu à / Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	Expédié à / Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN	Livré à / Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA
Date d'expédition / Date Shipped 06-DEC-2012	F.O.B. ORIGIN	Modalités de transport / Freight Terms Prepaid	Transporteur / Carrier MANITOULIN	No du Bon de connaissance / BOL No 1565010-2

Détails d'expédition / Shipment Details				Destination finale / Final Destination Branch - MON			
N° de commande / Order No	N° de ligne Line No	N° d'article / Item No	Description				
2550929	1	752237.MO	2.0000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 6.25 IN () X 7.875 IN () SPECIFICATIONS: SHIP AS SOON AS REC'D QQ-A-250/12 GRAIN ALONG 7.875"				
N° de bon de commande / Purchase Order No		Nbre de pièces / Part Number	Qté commandée / Ordered Qty		Qté Facturée / Invoice Qty		
18441		YOUR ITEM NUMBER: D6101-003	30.00 PCS		30.00 PCS		
Détails / Details	SHIP AS SOON AS REC'D QQ-A-250/12 GRAIN ALONG 7.875"						
N° de livraison / Delivery No :	Usine / Mill	No de coulée / Heat Number	Code méc / Mech Id	Pièce s / PCS	Largeur (Pouce)/ Width (IN)	Longueur (Pouce)/ Length (IN)	Qté expédiée/ Shipped Qty(LBS)
118210764	MATERIALS TECHNOLOG Y	651951		30			304.8254

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.
Date Printed: 06-DEC-2012 02:04:56 PM



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A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 2 of 2

SOLUTIONS							
<p>Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.</p> <p>These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.</p> <p>Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.</p> <p>We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.</p>							
Ce matériel a été reçu et inspecté par Reviewed by Authorized Castle Metals Representative:				Date:		Name:	

WE HEREBY CERTIFY THAT THE MATERIAL COVERED BY THIS CERTIFICATE HAS BEEN INSPECTED WITH, AND HAS BEEN FOUND TO MEET THE APPLICABLE REQUIREMENTS DESCRIBED THEREIN, INCLUDING ANY SPECIFICATIONS FORMING A PART OF THE CERTIFICATE, AND THAT THE SAMPLES REPRESENTATIVE OF THE MATERIAL IN THE COMPOSITION LOTS AND HAD THE MECHANICAL PROPERTIES SHOWN ON THE FACE OF THIS CERTIFICATE.

THIS TEST REPORT SHALL NOT BE REPRODUCED OR ACCEPTED AS SUCH, UNLESS THE WRITTEN APPROVAL OF THE QUALITY DEPARTMENT. NO ALTERATION, ADDITION OR CHANGE THEREIN IS AUTHORIZED TO BE MADE IN ANY CERTIFICATE. THE RECORDS OF THIS, INCLUDING ANY SIGNATURE, STATEMENTS OR ENTRIES ON THIS CERTIFICATE BY ANY TECHNICIAN MAY BE PURSUED AS A VIOLATION UNDER APPLICABLE LAW.

Per _____

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Rob Woodall
Rob Woodall
Director of Manufacturing Devonport Works

Telence Trust
CUSTODY ASSURANCE MANAGEMENT

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722
Ship From: RIVERDALE, IA.

1442476	C		Ship From:	RIVERDALE, IA.
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item
2012-10-12	7428445	00000	1000417340-4	
P.O. No./Govt Contract No.	Customer		Alcoa Item	DP-17340-4
039050 Ltr# 4		RADCO METAL TRADING 004101551AR21		

Page 2 of 2

COR: D164164-34 - Specification Limits (cont.)
T7351 Elec. Cond. (EC) & MIN 38.0 FOR

Chemical Composition

	Max	Min	Cu	Mn	Ni	Cr	Zn	Ti	Other	Total Aluminum
Alloy 7075	0.40	0.50	2.0	0.30	2.9	0.28	6.2	0.20	0.05	0.15
Lot: 651951	- Mechanical	- Physical	- Metallurgy	No-3						REMAIN

Impr	Dir	No. of Test	UTS	YFS	Elong	Reduct	Remain
T7351	Long Transv.	3	KSI	KSI	PER		
			72.2	51.5	16.7		
			72.3	51.5	16.7		
			72.1	51.4	16.7		

T7351. Elect Cond HIACS 40.1 40.2 40.3 PCT

Cast Number	Chemical	- OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9043096	Actuals		0.07	0.28	1.6	0.04	0.6	0.10	5.6	0.02

This material was melted in the

This material was melted in the United States by a Qualifying Country (REF ID: A7211a); it was manufactured in the United States

Castle Metals Men

HEAT NUMBER 651951
MECHANICAL ID _____
ITEM CODE 752237. B0
LOT NUMBER 2796268 MON
PO NUMBER 17424
RECEIPT DATE 12-5-12
SUPPLIER MTA
SPECIFICATION AMS-QQ-A-250-12
LCS _____
COMMENT _____
APPROVED B

Item 152237: Bo Po 17424 2 pager

CERTIFIED INSPECTION REPORT

We hereby certify that the material covered by this certificate has been inspected with and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the inspection limits and that the mechanical properties shown on the face of this page.

This report shall not be reproduced except in full without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or omissions on this certificate by any applicant may be punished as a felony under applicable law.

Rob Woodall

Rob Woodall
Director of Manufacturing Davenport Works

Terrence Tish
Terrence Tish
Quality Assurance Manager

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship Date: 2012-10-12 B.L. No: 7428446 Invoice No: 00000 Alcoa No. Item: 1009417340-4 Ship From: RIVERDALE, IA.
P.O. No./Govt Contract No: 049050 Lot#: 3 Customer: HATCO METAL TRADING CO. Alcoa Item: DP-17340-4

Page 1 of 2

Item Description:
2.0 IN TK (4.055 - .055) W 48.5 IN W (4.3125 - .0001) X 144.5 IN DN (+.5 - 0.0) QMT N 164164 (N) A/T 7075-
T7351 RECTANGLE MILL FINISH, UST IMM. DEAD ZONE REQ'D BOTH SIDES,
SAMED. AMS-QQ-A-250/12 IS 2007 AMS-STD-2154 TO 2010 EXC MRK AMS-STD-2154
ASTM B209 REV 10 ASTM B209 REV 09 3557055
REV 4 EXC MRK AMS-STD-2154 REV 3 3521211 REV 1
(MARKED) KRAFT PAPER INTERLEAVED
MAX GROSS SKID WGT: 4500 LB QUAN TOL +/-
40 ± UST CL A 3 MM CQR D164164 REV 14 CUST REQ 12-09-
28 *** W/E 12-10-13 ***

Num	Package Ticket	Lot	Weight	Quantity	UOM	Inspector Clock Numbers
1	458063	651951	1431	1	PC	
2	458065	651951	2860	2	PC	
3	458067	651951	2860	2	PC	
			7153	5		

Notes for CQR: D164164.34
THIS MATERIAL HAS BEEN ULTRASONICALLY INSPECTED FULLY IMMERSION - TYPE 2.
PRODUCT PRODUCED TO THE REQUIREMENTS OF MIL-STD-2154 ALSO MEETS THE REQUIREMENTS OF AMS-STD-2154. PRODUCT PRODUCED TO THE
REQUIREMENTS OF AMS-STD-2154 ALSO MEETS THE REQUIREMENTS OF MIL-STD-2154.
PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/12. PRODUCT
PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/12.

CQR: D164164.34 -Specification Limits

Temp	Dir	UTS	TYS	ELAD
T7351	Long Transv.	KSI	KSI	ECT
	Max	68.0	68.0	
	Min	59.0	57.0	6

Chantal Lavoie

From: Desbiens, Marc <mdesbien@amcastle.com>
Sent: December 12, 2012 9:19 AM
To: Chantal Lavoie
Subject: RE: info

Hi Chantal,

No, it's ok. You can use them as door stoppers or paper weights

Thanks

From: Chantal Lavoie [mailto:clavoie@dartaero.com]
Sent: Wednesday, December 12, 2012 9:05 AM
To: Desbiens, Marc
Subject: RE: info

Thank you Marc,
Would you like me to send the other two pcs.
Chantal

From: Desbiens, Marc [mailto:mdesbien@amcastle.com]
Sent: December 12, 2012 8:37 AM
To: Chantal Lavoie
Subject: RE: info

Hi Chantal,

We will replace 2 pcs @ no charge

Thanks

From: Chantal Lavoie [mailto:clavoie@dartaero.com]
Sent: Tuesday, December 11, 2012 11:56 AM
To: Desbiens, Marc
Subject: info

Hi Marc,
We have rec'd p/o:18441 for item D6101-003 for qty of 30 pcs. But 2 pcs the grain direction was on the wrong side what would you like to do.

Thanks
Chantal

This E-mail may contain proprietary information and may be confidential. You are to treat this material in accordance with your company's confidentiality policies and limit any distribution accordingly. If you are not the intended recipient of this E-mail, you are hereby notified that any dissemination, distribution or copying of this message is strictly prohibited. If you received this message in error, please delete it immediately.

**Castle Metals®**

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 1 of 2

No de Formulaire d'Emballage / Shipment No:1586400

Expédié de / Ship From:		Vendu à / Sold To:		Expédié à / Ship To:		Livré à / Deliver To:	
A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date d'expédition / Date Shipped	F.O.B.	Modalités de transport / Freight Terms		Transporteur / Carrier		No du Bon de connaissance / BOL No	
02-JAN-2013	ORIGIN	Prepaid		UPS		1586400-2	

Détails d'expédition / Shipment Details	Destination finale / Final Destination Branch - MON
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N° de commande / Order No	N° de ligne Line No	N° d'article / Item No	Description				
2589049	1	752237.MO	2.0000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 6.25 IN (+ .0620/- .0000 IN (GRAIN TO RUN ALONG 7.875")) X 7.875 IN (+ .0620/- .0000 IN (GRAIN TO RUN ALONG 7.875")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12				
N° de bon de commande / Purchase Order No		Nbre de pièces / Part Number		Qté commandée / Ordered Qty		Qté Facturée / Invoice Qty	
18441		YOUR ITEM NUMBER: D6101-003		2.00 PCS		2.00 PCS	
Détails / Details		END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS ECCN # EAR99					
N° de livraison / Delivery No :	Usine / Mill	No de coulée / Heat Number	Code méc / Mech Id	Pièce s / PCS	Largeur (Pouce)/ Width (IN)	Longueur (Pouce)/ Length (IN)	Qté expédiée/ Shipped Qty(LBS)
118241015	KAISER ALUMINUM	745109A9		2			20.3217
Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des Etats-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite. These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.							

14
9-89



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A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 2 of 2

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Ce matériel a été reçu et inspecté par
Reviewed by Authorized Castle Metals Representative:

Date:

Name:

SHIP TO:

CASTLE METALS AEROSPACE
12 CASCADE BLVD.
ORANGE, CT 06477

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

SOLD TO:

AM CASTLE & CO- SOLD TO
1420 KENSINGTON RD
SUITE 220
OAK BROOK, IL 60523

CERTIFIED TEST REPORT

Serial Number
4256704

CUSTOMER PO NUMBER: 142615		WORK PACKAGE:	CUSTOMER PART NUMBER: 752237		SHIP RUNLOAD: 102267/10	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1127179	LINE ITEM: 1	SHIP DATE: 7-MAR-2012	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: Sawed Plate
WEIGHT SHIPPED: 4285 LB	QUANTITY: 3 PCS EST.	B/L NUMBER: 2036104	GAUGE: 2.0000 IN		DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN

MHU 1565259: LOT 744702A2: 2 pieces;
MHU 1568773: LOT 745109A9: 1 pieces;

Certified Specifications

AMS 407B/RevJ
ASTM B 209/Rev10
BSS 7055/RevA
DPS 4.713/RevAH
MMS 159/RevR

AMS-QQ-A-250/12
ASTM B 594/Rev09
CMMP 025/RevU
GAMPS 9101/RevB
PS 21211/RevL

AMS-STD-2154/Rev98
BAC 5439/RevH
CSTI 006/RevD
GSS16100/RevG/Amd1

Test Code: 4297**Test Results**

Lot: 744702A2 Cast 449 Drop 10 Ingot 3 Parent Lot: 572989A2 Melted in USA

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.6 : 72.5 (487 : 500)	59.9 : 62.3 (413 : 430)	11.3 : 12.1

(ASTM E1004)
(EN 2004-1)
Conductivity %IACS : 41.3 Min 42.0 Max
(MS/M) : 24.0 Min 24.4 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.27	1.5	0.04	2.4	0.21	5.8	0.02	0.01	0.01	TOT



RECEIVED MAR 13 2012

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4256704

Lot: 745109A9 Cast 449 Drop 06 Ingot 2 Parent Lot: 569141A5 Melted in USA

(ASTM E8/B557)
(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.4 : 71.6 (485 : 494)	59.3 : 61.2 (409 : 422)	11.8 : 12.9

(ASTM E1004)
(EN 2004-1)

Conductivity %IACS :	40.4 Min	40.8 Max
(MS/M) :	23.4 Min	23.7 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.17	1.4	0.03	2.5	0.21	5.5	0.03	0.01	0.01	TOT 0.05

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075												
MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

Metal represented by this test report was 100% immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

13/01/06
0.00
0.00

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.672-1(b), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

Mike Klocke

MIKE KLOCKE, LABORATORIES SUPERVISOR

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Page 2 of 2

